

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 3, 4, 10, 11 and 17 as follows.

1. (Currently Amended) A gas supplying apparatus in a fuel cell, wherein the fuel cell is supplied a supply gas and discharges the supply gas as exhaust gas, the gas supplying apparatus comprising:

a compressor which sucks the exhaust gas from downstream of said fuel cell, and which compresses the exhaust gas, which is generated from said supply gas by power generation in the fuel cell, and

a heat exchanger, into which the supply gas having a pressure lower than atmospheric pressure and the exhaust gas having a pressure higher than said supply gas are introduced to perform heat exchange between said supply gas and said exhaust gas, ~~after the exhaust gas has been compressed and heated by said compressor wherein said compressor increases the temperature of the exhaust gas by compressing the exhaust gas before the exhaust gas is~~ introduced to said heat exchanger.

2. (Original) The gas-supplying apparatus in a fuel cell as claimed in Claim 1, further possessing a controller, which controls the pressure of the exhaust gas to be incorporated into the heat exchanger.

3. (Currently Amended) The gas-supplying apparatus in a fuel cell as claimed in Claim 2, wherein ~~said controller~~ the pressure of the exhaust gas is controlled depending upon the temperature of the supply gas.

4. (Currently Amended) The gas-supplying apparatus in a fuel cell as claimed in Claim 3, wherein ~~said controller~~ the pressure of the exhaust gas is controlled in such a manner that the temperature of the supply gas becomes a demand temperature.

5. (Original) The gas-supplying apparatus in a fuel cell as claimed in Claim 4, wherein the pressure of the exhaust gas to be introduced into the heat exchanger is controlled through the controller so as to be increased when the temperature of the supply gas is lower than the demand temperature.

6. (Original) The gas-supplying apparatus in a fuel cell as claimed in Claim 4, wherein said exhaust gas to be introduced into the heat exchanger is controlled through the controller so as to be decreased when the temperature of the supply gas is higher than the demand temperature.
7. (Original) The gas-supplying apparatus in a fuel cell as claimed in Claim 2, wherein said controller is a control valve, which controls the pressure of the exhaust gas to be incorporated into the heat exchanger.
8. (Original) The gas-supplying apparatus in a fuel cell as claimed in Claim 1, wherein said heat exchanger comprises a water-permeable membrane type humidifier which humidifies the supply gas with the water contained in the exhaust gas.
9. (Original) The gas-supplying apparatus in a fuel cell as claimed in Claim 8, further possessing a controller, which controls the pressure of the exhaust gas to be incorporated into the heat exchanger.
10. (Currently Amended) The gas-supplying apparatus in a fuel cell as claimed in Claim 9, wherein ~~said controller~~ the pressure of the exhaust gas is controlled depending upon the humidity of the supply gas.
11. (Currently Amended) The gas-supplying apparatus in a fuel cell as claimed in Claim 10, wherein ~~said controller~~ the pressure of the exhaust gas is controlled in such a manner that the humidity of the supply gas becomes target humidity.
12. (Canceled)
13. (Previously Presented) A process for controlling a temperature of a supply gas to be supplied to a fuel cell, comprising:
introducing said supply gas having a pressure lower than atmospheric pressure into a heat exchanger and, at the same time, introducing an exhaust gas discharged from the fuel cell and having a pressure higher than said supply gas to perform heat exchange between the

supply gas and the exhaust gas, wherein the temperature of said exhaust gas is increased by compressing the exhaust gas before the exhaust gas is introduced into said heat exchanger.

14-16. (Canceled)

17. (Currently Amended) A process for controlling a temperature of a supply gas to be supplied to a fuel cell, comprising:

compressing an exhaust gas discharged from the fuel cell to increase the temperature of the exhaust gas;

introducing said supply gas having a pressure lower than atmospheric pressure into a heat exchanger, and

introducing the compressed exhaust gas having a pressure higher than said supply gas into said heat exchanger to perform heat exchange between the supply gas and the compressed exhaust gas.

18. (Previously Presented) A process for controlling a temperature of a supply gas to be supplied to a fuel cell, comprising:

introducing said supply gas having a pressure lower than atmospheric pressure into a heat exchanger, and

introducing the exhaust gas having a pressure higher than said supply gas into said heat exchanger to perform heat exchange between the supply gas and the exhaust gas, wherein the temperature of the exhaust gas is controlled prior to introducing the exhaust gas into the heat exchanger.

Please add claim 19 as follows.

19. (New) A gas supplying apparatus in a fuel cell, wherein the fuel cell receives a supply gas and discharges an exhaust gas, the gas supplying apparatus comprising:

a heat exchanger for receiving the supply gas having a pressure lower than atmospheric pressure and for receiving the exhaust gas having a pressure higher than the supply gas, wherein the exhaust gas exchanges heat with the supply gas in said heat exchanger,

a compressor positioned between the fuel cell and the heat exchanger for compressing the exhaust gas to control the temperature of the exhaust gas before the exhaust gas is introduced to said heat exchanger.